

Of Vital Importance



To Apple II Plus Owners

You've just purchased your Apple II Plus, and we know you're eager to begin using it. It's very important that you read this manual first. It tells you how to set up your Apple II Plus. Read through this short manual, then go back and do the sections in it that apply to you before going on to the other manuals you'll find packed with your computer.

As you read this manual, you will see three symbols that alert you to special information. These symbols—the hand, the eye, and the stop sign—look like this:



This symbol precedes a paragraph that contains especially useful information.



Watch out! This symbol precedes a paragraph that warns you to be careful.



Stop! This symbol precedes a paragraph warning you that you are about to damage your equipment or destroy the information you and your Apple II Plus are working with.

We use these symbols in all Apple manuals. Look for them for helpful and important information.

Your Apple's Warranty

Your dealer should have filled out a Warranty Registration card for your Apple II Plus and mailed it to Apple Computer. This card will register your computer with the factory. More important, it will register you as an Apple owner so that we can be sure you receive newsletters and information about Apple II Plus hardware and software. If your dealer has not done this, please take a moment now to fill out and mail this card.

What You Should Have

Packing List

This manual was in your accessory kit. The accessory kit also contains a list of the items that should be packed in it. Make sure the box does contain everything it should and if anything is missing, contact your dealer.

By the way, every Apple box contains a packing list. It's a good idea to check the contents of any box as soon as you open it.

Please be sure you keep all the documents that come in the accessory kit. Some of them are addenda and errata that you may need later, after you've set up your computer.

What You'll Need

In addition to your Apple II, you will need two more items chosen from the options below. (None of these items is supplied.)

1. In order to see what you're typing and the Apple II's responses to your messages, you need some kind of "display":
 - a. A monitor (a TV that doesn't receive broadcast programs) and the video cable that comes in your accessory kit.
OR

- b. A home television set and an RF modulator. (The modulator changes the signal produced by the Apple II so that it matches what your TV expects to receive. A variety of modulators are available, and your Apple dealer will help you select one that is certified by the Federal Communications Commission.)
2. To store information so that you and your Apple II can use it, you need one of the following items:
 - a. The Apple Disk II disk drive and controller card.
OR
 - b. A cassette tape recorder and a cable to connect it to the Apple.

Raiding Your Tool Box

If you purchased a Disk II drive with Controller, you will need a small Phillips screwdriver to install the controller card.

The large staples used to close your Apple II carton can bite. A pair of pliers or a regular screwdriver can be handy for removing them.

Unpacking The Computer

Clear some table space. You should have enough space to set out your equipment as you unpack it and comfortable elbowroom in which to assemble your Apple II Plus.

The Apple II Plus is protected by foam and cardboard packing material in the carton below the accessory kit. Your computer is sturdy and will withstand some rough handling, but be careful not to drop it as you remove it from the carton. After removing the staples, hold the carton steady with your feet or knees. Reach down into the carton until you can get your hand under the computer, and lift it and the packing material out of the carton.

Hold on to the Apple II Plus as the packing material springs apart. Then place the computer on a table and slide it out of its plastic bag.

Setting Up Your Apple II Plus

Several different pieces of equipment can attach to the Apple II Plus. With a Phillips screwdriver and a bit of care, you can easily set up your Apple and the equipment you've chosen. Look for the pictures of your equipment to find the installation directions you need. When you've finished setting up your Apple ("configuring your system" as computer folks say), it will look like one of the versions below.

The Power Cord

Your accessory kit contains two cords, a power cord and a video cable. Set the video cable aside for now. Plug the Apple end of the power cord into the connector next to the power switch at the rear of the Apple II Plus. Plug the other end into a three-prong grounded outlet. If the system is not properly grounded, it may cause radio and television interference. (Radio interference sounds like static; TV interference looks like snow. For more information on interference, see page vi in *The Applesoft Tutorial*, one of the manuals in your accessory kit.)



You can help reduce interference by using only the correct equipment. Your dealer can tell you which equipment is certified by the FCC (Federal Communications Commission) for your type of system.

Be certain that the power switch at the rear of your Apple II Plus stays in the OFF position until you have finished setting up your system. From time to time during the set-up procedures, check that your system is off. Look at the power switch to be sure it is in the OFF position and check the power light at the lower left side of your keyboard to be sure that it is not glowing.



Make sure that your Apple II Plus stays plugged into the wall socket and that the power switch is off until you have finished setting up your system. You may damage your Apple II Plus if your system is unplugged or turned on while you are installing equipment.

Apple II Plus and Monitor



Plug one end of the video cable into the jack marked Video Out on the rear of the Apple II Plus. Plug the other end into the input jack at the back of the monitor. Plug the monitor's power cord into the wall socket.

Apple II Plus and TV



Your home TV will work with your Apple if you supply an RF modulator. (We've supplied the connecting video cable—it's in your accessory kit.)

To install the modulator, you need to open and remove the cover of your Apple II Plus. Stand facing the keyboard. Place both your palms on the cover and curl your fingertips under the lip of the cover's back edge. Pull straight up on the back of the cover. Use both hands and pull until the back corner fasteners pop apart. Then slide the cover back and away from the keyboard. Now follow the installation instructions that come with your RF modulator.

Apple II Plus and Disk Drive



Carefully unpack your Disk II drive and place it to the right of your Apple II Plus. Check the list that is packed with the drive to be sure you have everything you should. Then follow the "Installation Instructions for the Disk II". You'll probably find it under the cover of *The DOS Manual* that comes with your disk drive.

Apple II Plus and Cassette Recorder



You need a cable with two plugs on each end to hook up the cassette recorder to your Apple II Plus. Your Apple dealer will help you choose a cable that will work with your recorder and your Apple. Notice that there is a dark and a light colored plug at each end of the cable. Connect one dark plug to the MIC or MICROPHONE jack on the recorder, and the other dark plug (on the opposite end of the cable) to the jack marked CASSETTE OUT on the back of the Apple. Connect the light colored plug on the recorder end of the cable to the EAR or EARPHONE or MON or MONITOR jack on the recorder. (Different recorder manufacturers use different words.) Connect the light colored plug on the computer end of the cable to the jack marked CASSETTE IN. (OUT means "out of the computer" and IN means "into the computer".)

The cassette recorder will be ready to use when you plug its power cord into a wall socket.

Any Other Equipment?

Now install any other equipment you may have purchased. Each piece of equipment comes with its own installation instructions. Read over the entire procedure before beginning any installation, and be certain the Apple is turned off. Your dealer can help if any instruction seems difficult or you have problems with a procedure at any point.

Power to Your Apple

When you're satisfied that all your equipment is properly installed, close the cover of the Apple II Plus. Slide the front edge of the cover back into place, and then press down on the two rear corners until they pop into place.

Now your Apple is set up. It's ready to be turned on whenever you want to enter the fascinating world of personal computers. Just push the power switch to the ON position.

Now What?

Your computer is all dressed up with nowhere to go? Which manual you read next depends on how you want to use your system and on its configuration (how you've set up your Apple II Plus: disk drive or recorder? TV or monitor? any other equipment?). If you are a Newcomer to computers, you'll want to start with a manual that introduces you to BASIC, the language in which you'll tell your Apple II Plus what to do. If you're an Old Hand at programming, the introductory manual will show you new features that make programming a lot more fun.

Applesoft BASIC

Your Apple II Plus comes with Applesoft BASIC built in as its native language. After you've finished reading this short manual, the best source of information about Applesoft is *The Applesoft Tutorial*. Begin with the Introduction on page 2, and then skip to pages 5 through 11 to explore your keyboard. Then you'll be ready to move on to Chapter 2, "Beginning Applesoft".

Some of the cassette programs referred to in *The Applesoft Tutorial* are also found on the System Master diskette that comes with the disk drive. The cassettes are also available separately as Apple Product Number A2T0017. Ask your dealer for the Applesoft Cassette Demos.

Certain parts of *The Applesoft Tutorial* mention hand controllers. Hand controllers are now sold separately as Apple Product Number A2M0007. If you want to use hand controllers with the tutorial, please contact your local dealer.

Integer BASIC

There are two ways to have your Apple II Plus "speak" Integer BASIC as well as Applesoft. The first is to plug in an Integer BASIC Firmware Card. The second way is to install a Language Card, which makes several other computer languages available to you. If you have the Firmware Card, the manual that comes with it will tell you how to install it and how to move from Applesoft into Integer BASIC. If you are using a Language Card, you also have a disk drive, and you will find Integer BASIC stored on the System Master diskette. The best source of information about Integer BASIC is the *Apple II BASIC Programming Manual*.

Some of the cassette programs mentioned in the manual are also found on the System Master diskette that comes with your disk drive. They are also available separately as Apple Product Number A2T0016. Ask your local dealer for the Integer BASIC Cassette Demos.



Even though you don't have the cassette tapes or the hand controllers referred to on some pages of the *BASIC Programming Manual* or *The Applesoft Tutorial*, you can still learn to use the concepts presented by reading those sections. Try it. It's easy!

Three Important Procedures

New Apple owners need to know about three important procedures. Two are very important to every Apple owner. The third is important to those who use diskettes (and our studies show that almost every Apple owner uses diskettes sooner or later). You've spent some time and care unpacking and setting up your Apple II Plus. Now please take a few minutes more to read the sections that follow.

Stay Connected to Mother Earth

Your Apple II Plus is a versatile computer, and you can increase its capabilities by adding equipment to it. It is crucial to remember to turn off the computer whenever you are going to connect or disconnect anything inside it.

Don't unplug the Apple—just turn it off. If you unplug the power cord, you will isolate your system from earth ground and leave it vulnerable to static discharge that can damage equipment.



Turn OFF the power switch at the back of the Apple whenever connecting or disconnecting anything. If the power is on, you are likely to damage your equipment.

It's a good idea to touch the cover of the power supply (the metal box on the left, inside the computer) before connecting or disconnecting anything. This will discharge any static electricity you may have picked up from carpets, clothing, etc.

Resetting RESET

When you unpacked your accessory kit, you found a sheet of paper entitled "The Apple Encoder Board". This small document describes a change many Apple owners make to the RESET key to guard against hitting it accidentally. (Some Apple dealers make this change for their customers.) If you or your dealer have made this change, you will need to press the CTRL key and hold it down while pressing RESET.

For Diskette Users Only

You will read pages 5 through 12 of *The DOS Manual* to learn how to care for your diskettes and how to transfer the information they contain to the Apple. (Transferring information from a diskette to the Apple is called "booting".) Then, someday, you may find a diskette that won't boot properly. You put the diskette into the drive, go through the booting procedures your system requires, and your drive just whirrs and whirrs.

Perhaps the diskette is slightly off-center in the disk drive. Opening the door of the disk drive and closing it again will re-center the diskette in the drive.

If your diskette still doesn't boot, maybe your disk drive can't recognize the sectors, or spaces, where information is stored on that diskette. That is, your Apple Disk Operating System (DOS 3.3) expects to find information stored on diskettes in an arrangement of 16 sectors, but your problem diskette has its information stored in 13 sectors (DOS 3.2 and earlier versions of DOS). Your Apple was looking for information in all the wrong places.



The manual that comes with your disk drive will tell you which DOS you have. The only way you can have 16-sector DOS locate information stored on diskettes with 13-sector storage format is to follow the procedures discussed below.

First stop the whirring disk drive. Open the door of the drive and press the RESET key (or CTRL-RESET if you have changed your encoder board). When the red IN USE light goes out, remove your diskette. (Opening the disk drive door automatically lifts the disk from the drive head below it, saving the information stored on the diskette from possible damage during RESET.)



NEVER remove a diskette while the drive's IN USE light is on. This may permanently damage the diskette, and is almost sure to destroy the information on it. In such a case, the diskette can usually be re-used, but you won't be able to recover the lost information.

There are two ways to boot that problem diskette and use the information stored on it.

- * The DOS 3.3 BASICS diskette that comes with your Disk II has a program that boots 13-sector diskettes.
- * You can also convert your 13-sector diskette, and the information it contains, to 16 sector. Use the MUFFIN program on the DOS 3.3 System Master diskette.

Appendices I and K of *The DOS Manual* tell how to use the BASICS diskette and the MUFFIN program.

EXTRA! ... EXTRA! ...

Read all about it! The latest news from Apple, that is. It is very important to us to keep you informed about improvements in our products. One way we do this is to use your comments on the User Input Report form to revise our manuals. Sometimes, however, our manuals can't keep pace with the changes we're making. To make certain you have the information you need, we also publish addenda, errata, and short installation instruction sheets. Whenever you unpack one of our products, make certain you look for these. They could save your Apple, your warranty, and your nerves.